IP Video product overview

Our focus is your IP video solution

March 2014

BOSCH
Invented for life

Added value for you

intelligent Dynamic Noise Reduction (iDNR)
Our focus is reducing storage costs and network strain by only using bandwidth when needed. When there is little or no movement in the scene, less bit rate is required. Therefore, iDNR actively analyses the scene distinguishing between important moving objects and noise artifacts. The degree of noise reduction is adjusted accordingly so that important objects are captured and noise artifacts suppressed, optimizing the camera's bit rate. In certain scenes, iDNR saves you up to 50% on bit rate and hence storage and bandwidth requirements without reducing video quality.

intelligent Auto Exposure (iAE)
Our focus is providing you with perfect exposure of moving objects every time. Back and front light fluctuations ruin your surveillance images. iAE automatically focuses on relevant objects, dynamically adjusting the dynamic range of the camera thus ensuring clear visibility and optimal identification in both dark and bright areas of the scene.

intelligent Tracking
Our focus is to never lose track of objects of interest.Intelligent tracking continuously analyses the scene for moving objects.
If a moving object is detected, the camera automatically adjusts its settings, including field of view, to optimally capture details of the object of interest.
Intelligent tracking can either be triggered automatically, based on pre-defined IVA rules, or manually (one-click).

starlight
Our focus is delivering the ultimate 24/7 IP video surveillance camera.
In-camera intelligence and starlight technology give amazing usable images in any light conditions, making darkness totally visible.All starlight cameras deliver superior light sensitivity, wide dynamic range, high resolution (up to 5 megapixel) and the ability to capture fast moving objects (up to 60 fps) with lowest cost and network strain. Built-in iDNR reduces bitrates up to 50% saving on storage costs and bandwidth requirement therefore lowering network train substantially.

ultra HD
Our focus is enabling you to see every detail, everywhere. Ultra HD from Bosch enables you to simultaneously cover large areas and still focus your attention on particular regions of interest in the same scene. In this way large amounts of data becomes more manageable without losing the complete overview. Region of interest tracking lets you track anything or anyone of interest in the scene automatically. Persons or objects can be identified even at incredible distances, whereas moving objects can be captured in ultra HD resolution at 30 frames per second.
Objects of interest are optimally identified in both dark and bright areas of the scene thanks to intelligent Auto Exposure.
Smart compression features like encoder regions and intelligent Dynamic Noise Reduction reduces bitrates up to 50%.
Ultra HD from Bosch delivers the highest quality of relevant IP video surveillance details while reducing bit rate, network strain and storage costs.

Intelligent Video Analysis (IVA)
Our focus is to alert you when needed nd help you retrieve the correct data fast.
Intelligent Video Analysis from Bosch adds sense and structure to video surveillance images for enhanced safety and security. IVA helps you to focus your attention on suspicious events when needed, enabling you to proactively respond. Since you cannot be everywhere all the time or watch everything at the same time, IVA alerts you via your mobile device when needed.
All recorded video material is structured by means of metadata enabling you to find the correct data instantly by means of the unique forensic search function.
No need to go back and forth through hours of recorded IP video surveillance material, simply search what you are looking for. For example: "someone climbing a fence" or "groups of people with a certain density". Instantly, the correct data matching your criteria are displayed making your search very effective.
Another benefit is that IVA data provides you with interesting marketing intelligence, bringing your IP video surveillance solution beyond security.

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IP Video
Dome Cameras

▪ Available – Not available

		▸FLEXIDOME IP micro 2000		▸FLEXIDOME IP micro 5000	
Commercial Type Number		**NUC-21002-F2**	**NUC-21012-F2**	**NUC-51022-Fxx**	**NUC-51051-Fxx**
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	▪	▪	▪	▪
	intelligent Auto Exposure (iAE)	–	–	–	–
	starlight (extreme low-light sensitivity)	–	–	–	–
	ultra HD	–	–	–	–
	Built-in Intelligent Video Analysis (IVA)	–	–	–	–
Basic features	Maximum resolution	VGA	HD 720p	HD 1080p	5 MP
	Image sensor type	1/4"	1/4"	1/2.7"	1/3.2"
	Max. Frames Per Second (FPS)	30 fps@480p	30 fps@720p	30 fps@1080p	12 fps@5MP
	Indoor / outdoor / in-vehicle	▪/–/–	▪/–/–	▪/▪/▪	▪/▪/▪
	Day/night	▪ (Electronic)	▪ (Electronic)	▪ (Electronic)	▪ (Electronic)
	Wide Dynamic Range (WDR)	76dB	76dB	76dB	65dB
	ONVIF conformant	▪	▪	▪	▪
	Built-in microphone	▪	▪	–	–
	Power over Ethernet (PoE)	▪	▪	▪	▪
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	▪/4 streams	▪/4 streams	▪/4 streams	▪/4 streams
	Privacy masking	▪	▪	▪	▪
	Region Of Interest tracking	–	–	–	–
Alarm triggering	Tamper detection	▪	▪	▪	▪
	Video motion detection	▪	▪	▪	▪
	Intelligent Video Analysis (IVA)	–	–	–	–
	Audio detection	▪	▪	–	–
Sensitivity	Minimum illumination day mode (color)	1 lux	1 lux	0.4 lux (F4) 1 lux (F2/F2M)	0.8 lux (F4) 2 lux (F2/F2M)
	Minimum illumination night mode (black / white)	–	–	0.4 lux (F4) 1 lux (F2/F2M)	0.8 lux (F4) 2 lux (F2/F2M)
	Night vision	–	–	–	–
	Max. range at night	–	–	–	–
Lens	Automatic Back Focus (ABF)	–	–	–	–
	Automatic varifocal	–	–	–	–
	Focal length	2.5 mm	2.5 mm	3.6 mm (F4) 2.5 mm (F2/F2M)	3.6 mm (F4) 2.5 mm (F2/F2M)
	Horizontal Angle of View (HAoV)	66.7°	89°	97° (F4) 135°(F2/F2M)	74° (F4) 105° (F2/F2M)
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	24 / 12 / 8 / 3	32 / 16 / 11 / 5	42 / 21 / 14 / 6 (F4) 19 / 10 / 7 / 3 (F2)	85/42/29/12 (F4) 48/25/17/7 (F2)
Storage	Memory card slot	▪ (up to 2 TB)	▪ (up to 2 TB)	▪ (up to 2 TB)	▪ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	–/–	–/–	–/–	–/–
	Audio in/out	–	–	–	–
	hybrid* / confrontation monitor	–/–	–/–	–/–	–/–
Housing	Weather rating	–	–	IP66	IP66
	Vandal resistant	–	–	IK8	IK8
	Operating temperature	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

IP Video
Dome Cameras

■ Available – Not available

		FLEXIDOME IP indoor 4000	
Commercial Type Number		**NIN-40012-V3**	**NII-40012-V3**
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■
	intelligent Auto Exposure (iAE)	–	–
	starlight (extreme low-light sensitivity)	–	–
	ultra HD	–	–
	Built-in Intelligent Video Analysis (IVA)	–	–
Basic features	Maximum resolution	HD 720p	HD 720p
	Image sensor type	1/2.7"	1/2.7"
	Max. Frames Per Second (FPS)	30 fps@720p	30 fps@720p
	Indoor / outdoor / in-vehicle	■/–/–	■/–/–
	Day/night	■	■
	Wide Dynamic Range (WDR)	76dB	76dB
	ONVIF conformant	■	■
	Built-in microphone	■	■
	Power over Ethernet (PoE)	■	■
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams
	Privacy masking	■	■
	Region Of Interest tracking	–	–
Alarm triggering	Tamper detection	■	■
	Video motion detection	■	■
	Intelligent Video Analysis (IVA)	–	–
	Audio detection	■	■
Sensitivity	Minimum illumination day mode (color)	0.24 lux	0.24 lux
	Minimum illumination night mode (black / white)	0.05 lux	0 lux
	Night vision	–	■ (infrared)
	Max. range at night	–	15 m (50 ft)
Lens	Automatic Back Focus (ABF)	–	–
	Automatic varifocal	–	–
	Focal length	3-10 mm	3-10 mm
	Horizontal Angle of View (HAoV)	36°-117°	36°-117°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	19-94/10-49/7-33/3-13	19-94/10-49/7-33/3-13
Storage	Memory card slot	■ (up to 2 TB)	■ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1
	Audio in/out	■	■
	hybrid* / confrontation monitor	–/–	–/–
Housing	Weather rating	–	–
	Vandal resistant	–	–
	Operating temperature	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)

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IP Video
Dome Cameras

▸**FLEXIDOME IP indoor 5000**

∎ Available – Not available

Commercial Type Number		NIN-50022-V3	NIN-50051-V3	NII-50022-V3
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	∎	∎	∎
	intelligent Auto Exposure (iAE)	–	–	–
	starlight (extreme low-light sensitivity)	–	–	–
	ultra HD	–	–	–
	Built-in Intelligent Video Analysis (IVA)	–	–	–
Basic features	Maximum resolution	HD 1080p	5 MP	HD 1080p
	Image sensor type	1/2.7"	1/3.2"	1/2.7"
	Max. Frames Per Second (FPS)	30 fps@1080p	12 fps@5MP	30 fps@1080p
	Indoor / outdoor / in-vehicle	∎/–/–	∎/–/–	∎/–/–
	Day/night	∎	∎	∎
	Wide Dynamic Range (WDR)	76dB	65dB	76dB
	ONVIF conformant	∎	∎	∎
	Built-in microphone	∎	∎	∎
	Power over Ethernet (PoE)	∎	∎	∎
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	∎/4 streams	∎/4 streams	∎/4 streams
	Privacy masking	∎	∎	∎
	Region Of Interest tracking	–	–	–
Alarm triggering	Tamper detection	∎	∎	∎
	Video motion detection	∎	∎	∎
	Intelligent Video Analysis (IVA)	–	–	–
	Audio detection	∎	∎	∎
Sensitivity	Minimum illumination day mode (color)	0.24 lux	0.5 lux	0.24 lux
	Minimum illumination night mode (black / white)	0.05 lux	0.075 lux	0 lux
	Night vision	–	–	∎ (infrared)
	Max. range at night	–	–	15 m (50 ft)
Lens	Automatic Back Focus (ABF)	–	–	–
	Automatic varifocal	–	–	–
	Focal length	3-10 mm	3-10 mm	3-10 mm
	Horizontal Angle of View (HAoV)	36°-117°	28°-87°	36°-117°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	29-140 / 15-73 / 10-49 / 4-20	66-250 / 34-128 /23-86 / 9-35	29-140 / 15-73 / 10-49 / 4-20
Storage	Memory card slot	∎ (up to 2 TB)	∎ (up to 2 TB)	∎ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1	1/1
	Audio in/out	∎	∎	∎
	hybrid* / confrontation monitor	–/–	–/–	–/–
Housing	Weather rating	–	–	–
	Vandal resistant	–	–	–
	Operating temperature	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)

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IP Video
Dome Cameras

■ Available – Not available

		FLEXIDOME IP outdoor 4000	
Commercial Type Number		**NDN-40012-V3**	**NDI-40012-V3**
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■
	intelligent Auto Exposure (iAE)	–	–
	starlight (extreme low-light sensitivity)	–	–
	ultra HD	–	–
	Built-in Intelligent Video Analysis (IVA)	–	–
Basic features	Maximum resolution	HD 720p	HD 720p
	Image sensor type	1/2.7"	1/2.7"
	Max. Frames Per Second (FPS)	30 fps@720p	30 fps@720p
	Indoor / outdoor / in-vehicle	■/■/–	■/■/–
	Day/night	■	■
	Wide Dynamic Range (WDR)	76dB	76dB
	ONVIF conformant	■	■
	Built-in microphone	■	■
	Power over Ethernet (PoE)	■	■
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams
	Privacy masking	■	■
	Region Of Interest tracking	–	–
Alarm triggering	Tamper detection	■	■
	Video motion detection	■	■
	Intelligent Video Analysis (IVA)	–	–
	Audio detection	■	■
Sensitivity	Minimum illumination day mode (color)	0.24 lux	0.24 lux
	Minimum illumination night mode (black / white)	0.05 lux	0 lux
	Night vision	–	■ (infrared)
	Max. range at night	–	15 m (50 ft)
Lens	Automatic Back Focus (ABF)	–	–
	Automatic varifocal	–	–
	Focal length	3-10 mm	3-10 mm
	Horizontal Angle of View (HAoV)	36°-117°	36°-117°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	19-94/10-49/7-33/3-13	19-94/10-49/7-33/3-13
Storage	Memory card slot	■ (up to 2 TB)	■ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1
	Audio in/out	■	■
	hybrid* / confrontation monitor	–/–	–/–
Housing	Weather rating	IP66	IP66
	Vandal resistant	IK10	IK10
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

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IP Video
Dome Cameras

▸**FLEXIDOME IP outdoor 5000**

■ Available – Not available

Commercial Type Number		NDN-50022-V3	NDN-50051-V3	NDI-50022-V3
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■	■
	intelligent Auto Exposure (iAE)	–	–	–
	starlight (extreme low-light sensitivity)	–	–	–
	ultra HD	–	–	–
	Built-in Intelligent Video Analysis (IVA)	–	–	–
Basic features	Maximum resolution	HD 1080p	5 MP	HD 1080p
	Image sensor type	1/2.7"	1/3.2"	1/2.7"
	Max. Frames Per Second (FPS)	30 fps@1080p	12 fps@5MP	30 fps@1080p
	Indoor / outdoor / in-vehicle	■/■/–	■/■/–	■/■/–
	Day/night	■	■	■
	Wide Dynamic Range (WDR)	76dB	65dB	76dB
	ONVIF conformant	■	■	■
	Built-in microphone	–	–	–
	Power over Ethernet (PoE)	■	■	■
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams	■/4 streams
	Privacy masking	■	■	■
	Region Of Interest tracking	–	–	–
Alarm triggering	Tamper detection	■	■	■
	Video motion detection	■	■	■
	Intelligent Video Analysis (IVA)	–	–	–
	Audio detection	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.24 lux	0.5 lux	0.24 lux
	Minimum illumination night mode (black / white)	0.05 lux	0.075 lux	0 lux
	Night vision	–	–	■ (infrared)
	Max. range at night	–	–	15 m (50 ft)
Lens	Automatic Back Focus (ABF)	–	–	–
	Automatic varifocal	–	–	–
	Focal length	3-10 mm	3-10 mm	3-10 mm
	Horizontal Angle of View (HAoV)	36°-117°	28°-87°	36°-117°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	29-140 / 15-73 / 10-49 / 4-20	66-250 / 34-128 / 23-86 / 9-35	29-140 / 15-73 / 10-49 / 4-20
Storage	Memory card slot	■ (up to 2 TB)	■ (up to 2 TB)	■ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1	1/1
	Audio in/out	■	■	■
	hybrid* / confrontation monitor	–/–	–/–	–/–
Housing	Weather rating	IP66	IP66	IP66
	Vandal resistant	IK10	IK10	IK10
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

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IP Video
Dome Cameras

▪ Available – Not available

Commercial Type Number		▸FLEXIDOME IP starlight 7000 VR	▸FLEXIDOME IP 7000 VR	▸FLEXIDOME IP dynamic 7000 VR
		NIN-733-Vxxxx	NIN-832-Vxxxx	NIN-932-VxxIPx
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	▪	▪	▪
	intelligent Auto Exposure (iAE)	▪ (IVA models only)	▪ (IVA models only)	▪
	starlight (extreme low-light sensitivity)	▪	–	–
	ultra HD	–	–	–
	Built-in Intelligent Video Analysis (IVA)	▪ (depends on model)	▪ (depends on model)	▪
Basic features	Maximum resolution	HD 720p	HD 1080p	HD 1080p
	Image sensor type	1/3"	1/2.7"	1/3"
	Max. Frames Per Second (FPS)	60 fps@720p	30 fps@1080p	30 fps @1080p
	Indoor / outdoor / in-vehicle	▪/▪/–	▪/▪/–	▪/▪/–
	Day/night	▪	▪	▪
	Wide Dynamic Range (WDR)	84dB (IVA model + 16dB)	76dB (IVA model +16dB)	106dB
	ONVIF conformant	▪	▪	▪
	Built-in microphone	–	–	–
	Power over Ethernet (PoE)	▪	▪	▪
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	▪/4 streams	▪/4 streams	▪/4 streams
	Privacy masking	▪	▪	▪
	Region Of Interest tracking	▪	▪	▪
Alarm triggering	Tamper detection	▪	▪	▪
	Video motion detection	▪	▪	▪
	Intelligent Video Analysis (IVA)	▪ (depends on model)	▪ (depends on model)	▪
	Audio detection	▪	▪	▪
Sensitivity	Minimum illumination day mode (color)	0.017 lux (V03xx) 0.03 lux (V10xx)	0.22 lux (V03xx) 0.4 lux (V10xx)	0.25 lux (V03xx) 0.45 lux (V10xx)
	Minimum illumination night mode (black / white)	0.0057 lux (V03xx) 0.01 lux (V10xx)	0.05 lux (V03xx) 0.1 lux (V10xx)	0.08 lux (V03xx) 0.15 lux (V10xx)
	Night vision	▪ (starlight)	–	–
	Max. range at night	–	–	–
Lens	Automatic Back Focus (ABF)	▪	▪	▪
	Automatic varifocal	▪	▪	▪
	Focal length	3-9 mm (V03xx) 10-23 mm (V10xx)	3-9 mm (V03xx) 10-23 mm (V10xx)	3-9 mm (V03IPx) 10-23 mm (V10IPx)
	Horizontal Angle of View (HAoV)	32°-96° (V03xx) 12.4°-28° (V10xx)	38°-121° (V03xx) 14.8°-34° (V10xx)	28°-83° (V03IPx) 10.9°-24° (V10IPx)
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	28-107 / 15-55 / 10-37 / 4-15 (V03xx) 123-282 / 63-144 / 43-97 / 17-39 (V10xx)	26-133 / 13-69 / 9-46 / 4-19 (V03xx) 150-352 / 77-181 / 52-122 / 21-49 (V10xx)	52-184 / 27-94 / 18-64 / 7-26 (V03xx) 216-480 / 111-246 / 75-165 / 30-67 (V10xx)
Storage	Memory card slot	▪ (up to 2 TB)	▪ (up to 2 TB)	▪ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1	2/1
	Audio in/out	▪	▪	▪
	hybrid* / confrontation monitor	▪/▪	▪/▪	▪/▪
Housing	Weather rating	IP66	IP66	IP66
	Vandal resistant	IK10	IK10	IK10
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

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IP Video
Dome Cameras

▪ Available – Not available

		▸FLEXIDOME IP starlight 7000 RD	▸FLEXIDOME IP 7000 RD	▸FLEXIDOME IP dynamic 7000 RD
Commercial Type Number		**NDN-733Vxx-xx**	**NDN-832Vxx-xx**	**NDN-932Vxx-IP**
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	▪	▪	▪
	intelligent Auto Exposure (iAE)	▪ (IVA models only)	▪ (IVA models only)	▪
	starlight (extreme low-light sensitivity)	▪	–	–
	ultra HD	–	–	–
	Built-in Intelligent Video Analysis (IVA)	▪ (depends on model)	▪ (depends on model)	▪
Basic features	Maximum resolution	HD 720p	HD 1080p	HD 1080p
	Image sensor type	1/3"	1/2.7"	1/3"
	Max. Frames Per Second (FPS)	60 fps@720p	30 fps@1080p	30 fps @1080p
	Indoor / outdoor / in-vehicle	▪/▪/–	▪/▪/–	▪/▪/–
	Day/night	▪	▪	▪
	Wide Dynamic Range (WDR)	84dB (IVA model + 16dB)	76dB (IVA model +16dB)	106dB
	ONVIF conformant	▪	▪	▪
	Built-in microphone	–	–	–
	Power over Ethernet (PoE)	▪	▪	▪
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	▪/4 streams	▪/4 streams	▪/4 streams
	Privacy masking	▪	▪	▪
	Region Of Interest tracking	▪	▪	▪
Alarm triggering	Tamper detection	▪	▪	▪
	Video motion detection	▪	▪	▪
	Intelligent Video Analysis (IVA)	▪ (depends on model)	▪ (depends on model)	▪
	Audio detection	▪	▪	▪
Sensitivity	Minimum illumination day mode (color)	0.017 lux	0.22 lux	0.25 lux
	Minimum illumination night mode (black / white)	0.0057 lux	0.05 lux	0.08 lux
	Night vision	▪ (starlight)	–	–
	Max. range at night	–	–	–
Lens	Automatic Back Focus (ABF)	▪	▪	▪
	Automatic varifocal	–	–	–
	Focal length	1.8-3 mm (V02-xx), 3.8-13 mm (V03-xx), 9-40 mm (V09-xx)	1.8-3 mm (V02-xx), 3.8-13 mm (V03-xx), 9-40 mm (V09-xx)	1.8-3 mm (V02-xx), 3.8-13 mm (V03-xx), 9-40 mm (V09-xx)
	Horizontal Angle of View (HAoV)	77°-105° (V02-xx), 21°-72° (V03-xx), 7.1°-30° (V09-xx)	87°-115°(V02-xx), 26°-87°(V03-xx), 8.5°-37° (V09-xx)	70°-98°(V02-xx), 19°-63°(V03-xx), 6.2°-26° (V09-xx)
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	24-39/12-20/8-13/3-5 (V02-xx) 42-165/22-85/15-57/6-23 (V03-xx) 114-493/59-252/40-170/16-69 (V09-xx)	30-49/15-25/10-17/4-7 (V02-xx) 49-199/25-102/17-69/7-28 (V03-xx) 137-616/70-316/48-212/19-86 (V09-xx)	40-66/21-34/14-23/6-9 (V02-xx) 75-274/39-140/26-95/10-38 (V03-xx) 199-846/102-433/69-291/28-118 (V09-xx)
Storage	Memory card slot	▪ (up to 2 TB)	▪ (up to 2 TB)	▪ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1	2/1
	Audio in/out	▪	▪	▪
	hybrid* / confrontation monitor	–/–	–/–	–/–
Housing	Weather rating	IP66 & IP67	IP66 & IP67	IP66 & IP67
	Vandal resistant	exceeding IK10	exceeding IK10	exceeding IK10
	Operating temperature	-50° to 50° C (-58° to 122° F)	-50° to 50° C (-58° to 122° F)	-50° to 50° C (-58° to 122° F)

* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

IP Video
Fixed Cameras

■ Available – Not available

		▸TINYON IP 2000	▸TINYON IP 2000 HD
Commercial Type Number		**NPC-20002-F2**	**NPC-20012-F2**
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■
	intelligent Auto Exposure (iAE)	–	–
	starlight (extreme low-light sensitivity)	–	–
	ultra HD	–	–
	Built-in Intelligent Video Analysis (IVA)	–	–
Basic features	Maximum resolution	VGA	HD 720p
	Image sensor type	1/4"	1/4"
	Max. Frames Per Second (FPS)	30 fps@480p	30 fps@720p
	Indoor / outdoor / in-vehicle	■/–/–	■/–/–
	Day/night	■ (Electronic)	■ (Electronic)
	Wide Dynamic Range (WDR)	69dB	69dB
	ONVIF conformant	■	■
	Built-in microphone	–	■
	Power over Ethernet (PoE)	–	■
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams
	Privacy masking	■	■
	Region Of Interest tracking	–	–
Alarm triggering	Tamper detection	■	■
	Video motion detection	■	■
	Intelligent Video Analysis (IVA)	–	–
	Audio detection	–	■
Sensitivity	Minimum illumination day mode (color)	1 lux	1 lux
	Minimum illumination night mode (black / white)	–	–
	Night vision	–	–
	Max. range at night	–	–
Lens	Automatic Back Focus (ABF)	–	–
	Automatic varifocal	–	–
	Focal length	2.5 mm	2.5 mm
Lens	Horizontal Angle of View (HAoV)	75°	89°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	20/10/7/3	32/16/11/5
Storage	Memory card slot	■ up to 2 TB	■ up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	–/–	–/–
	Audio in/out	–/–	–/–
	hybrid* / confrontation monitor	–/–	–/–
Housing	Weather rating	–	–
	Vandal resistant	–	–
	Operating temperature	-10° to 45° C (14° to 113° F)	-10° to 50° C (14° to 122° F)

* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

IP Video
Fixed Cameras

▪ Available – Not available

		▶DINION IP 4000	▶DINION IP 5000	▶DINION IP bullet 4000 HD**	▶DINION IP bullet 5000 HD
Commercial Type Number		**NBN-40012-xxx**	**NBN-50022-xxx**	**NTI-40012-V3**	**NTI-50022-V3**
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	▪	▪	▪	▪
	intelligent Auto Exposure (iAE)	–	–	–	–
	starlight (extreme low-light sensitivity)	–	–	–	–
	ultra HD	–	–	–	–
	Built-in Intelligent Video Analysis (IVA)	–	–	–	–
Basic features	Maximum resolution	HD 720p	HD 1080p	HD 720p	HD 1080p
	Image sensor type	1/2.7"	1/2.7"	1/2.7"	1/2.7"
	Max. Frames Per Second (FPS)	30 fps@720p	30 fps@1080p	30 fps@720p	30 fps@1080p
	Indoor / outdoor / in-vehicle	▪/▪ (with housing)/–	▪/▪ (with housing)/–	▪/▪/–	▪/▪/–
	Day/night	▪	▪	▪	▪
	Wide Dynamic Range (WDR)	76dB	76dB	76dB	76dB
	ONVIF conformant	▪	▪	▪	▪
	Built-in microphone	▪	▪	–	–
	Power over Ethernet (PoE)	▪	▪	▪	▪
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	▪/4 streams	▪/4 streams	▪/4 streams	▪/4 streams
	Privacy masking	▪	▪	▪	▪
	Region Of Interest tracking	–	–	–	–
Alarm triggering	Tamper detection	▪	▪	▪	▪
	Video motion detection	▪	▪	▪	▪
	Intelligent Video Analysis (IVA)	–	–	–	–
	Audio detection	▪	▪	▪	▪
Sensitivity	Minimum illumination day mode (color)	0.25 lux	0.25 lux	0.24 lux	0.24 lux
	Minimum illumination night mode (black / white)	0.05 lux	0.05 lux	0 lux	0 lux
	Night vision	–	–	▪ (infrared)	▪ (infrared)
	Max. range at night	–	–	25 m (82ft)	25 m (82ft)
Lens	Automatic Back Focus (ABF)	–	–	–	–
	Automatic varifocal	–	–	–	–
	Focal length	3.3-12 mm (V03)/CS mount	3.3-12 mm (V03)/CS mount	3-10 mm	3-10 mm
	Horizontal Angle of View (HAoV)	34°-110° (V03)	34°-110° (V03)	36°-107°	36°-107°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	22-100/11-52/8-35/3-14 (V03)	33-150/17-77/11-52/5-21 (V03)	23-94/12-49/8-33/3-13	34-142/18-73/12-50/5-20
Storage	Memory card slot	▪ up to 2 TB	▪ up to 2 TB	▪ up to 2 TB	▪ up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1	1/1	1/1
	Audio in/out	▪/▪	▪/▪	▪/▪	▪/▪
	hybrid* / confrontation monitor	–/–	–/–	–/–	–/–
Housing	Weather rating	–	–	IP66	IP66
	Vandal resistant	–	–	IK7	IK7
	Operating temperature	-30° to 50° C (–22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system
** Available as of April 2014

IP Video
Fixed Cameras

▪ Available – Not available

		▸DINION IP starlight 7000 HD	▸DINION IP 7000 HD	▸DINION IP dynamic 7000 HD
Commercial Type Number		**NBN-71013-xx****	**NBN-71022-xx****	**NBN-71027-BA****
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	▪	▪	▪
	intelligent Auto Exposure (iAE)	▪	▪	▪
	starlight (extreme low-light sensitivity)	▪	–	–
	ultra HD	–	–	–
	Built-in Intelligent Video Analysis (IVA)	▪ (depends on model)	▪ (depends on model)	▪
Basic features	Maximum resolution	HD 720p, 1024p (no IVA)	HD 1080p	HD 1080p
	Image sensor type	1/3"	1/2.7"	1/3"
	Max. Frames Per Second (FPS)	60 fps@720p	30 fps@1080p	30 fps @1080p
	Indoor / outdoor / in-vehicle	▪/▪ (with housing)/–	▪/▪ (with housing)/–	▪/▪ (with housing)/–
	Day/night	▪	▪	▪
	Wide Dynamic Range (WDR)	84dB (IVA model + 16dB)	76dB (IVA model + 16dB)	106dB
	ONVIF conformant	▪	▪	▪
	Built-in microphone	–	–	–
	Power over Ethernet (PoE)	▪	▪	▪
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	▪/4 streams	▪/4 streams	▪/4 streams
	Privacy masking	▪	▪	▪
	Region Of Interest tracking	▪	▪	▪
Alarm triggering	Tamper detection	▪	▪	▪
	Video motion detection	▪	▪	▪
	Intelligent Video Analysis (IVA)	▪ (depends on model)	▪ (depends on model)	▪
	Audio detection	▪	▪	▪
Sensitivity	Minimum illumination day mode (color)	0.017 lux	0.22 lux	0.25 lux
	Minimum illumination night mode (black / white)	0.0057 lux	0.05 lux	0.08 lux
	Night vision	▪ (starlight)	–	–
	Max. range at night	–	–	–
Lens	Automatic Back Focus (ABF)	▪	▪	▪
	Automatic varifocal	–	–	–
	Focal length	C/CS mount	C/CS mount	C/CS mount
	Horizontal Angle of View (HAoV)	Depending on optional lens	Depending on optional lens	Depending on optional lens
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	Depending on optional lens	Depending on optional lens	Depending on optional lens
Storage	Memory card slot	▪ up to 2 TB	▪ up to 2 TB	▪ up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1	2/1
	Audio in/out	▪/▪	▪/▪	▪/▪
	hybrid* / confrontation monitor	▪/▪	▪/▪	▪/▪
Housing	Weather rating	–	–	–
	Vandal resistant	–	–	–
	Operating temperature	-20° to 50° C (-4° to 122° F)	-20° to 55° C (-4° to 131° F)	-20° to 50° C (-4° to 122° F)

* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system
** Lens not included

IP Video
Fixed Cameras

▪ Available – Not available

Commercial Type Number		▸DINION IP starlight 8000 MP**	▸DINION IP ultra 8000 MP**
		NBN-80052-BA	NBN-80122-Fxx
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	▪	▪
	intelligent Auto Exposure (iAE)	▪	▪
	starlight (extreme low-light sensitivity)	▪	–
	ultra HD	–	▪
	Built-in Intelligent Video Analysis (IVA)	▪	▪
Basic features	Maximum resolution	5 MP	12 MP / UHD
	Image sensor type	1/1.8"	1/2.3"
	Max. Frames Per Second (FPS)	30 fps@5MP	20 fps@12MP, 30 fps@UHD
	Indoor / outdoor / in-vehicle	▪/▪ (with housing)/–	▪/▪ (with housing)/–
	Day/night	▪	▪
	Wide Dynamic Range (WDR)	88dB	83dB
	ONVIF conformant	▪	▪
	Built-in microphone	–	–
	Power over Ethernet (PoE)	▪	▪
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	▪/4 streams	▪/4 streams
	Privacy masking	▪	▪
	Region Of Interest tracking	▪	▪
Alarm triggering	Tamper detection	▪	▪
	Video motion detection	▪	▪
	Intelligent Video Analysis (IVA)	▪	▪
	Audio detection	▪	▪
Sensitivity	Minimum illumination day mode (color)	0.022 lux	0.094 lux
	Minimum illumination night mode (black / white)	0.008 lux	0.031 lux
	Night vision	▪ (starlight)	–
	Max. range at night	–	–
Lens	Automatic Back Focus (ABF)	▪	▪
	Automatic varifocal	–	–
	Focal length	C/CS mount	3.2 mm (F2A) 5 mm (F6A)
	Horizontal Angle of View (HAoV)	Depending on optional lens	71° (-F6A) 120° (-F2A)
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	Depending on optional lens	134/69/46/20 (-F6A) 71/35/23/10 (-F2A)
Storage	Memory card slot	▪ up to 2 TB	▪ up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1
	Audio in/out	▪/▪	▪/▪
	hybrid* / confrontation monitor	–/–	–/–
Housing	Weather rating	–	–
	Vandal resistant	–	–
	Operating temperature	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)

* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system
** Available as of May 2014

IP Video
Specialty Cameras

▪ Available – Not available

		▸DINION IP imager 9000 HD	▸VOT thermal	▸FLEXIDOME IP corner 9000 MP
Commercial Type Number		**NAI-90022-AAA**	**VOT-320-Vxxx**	**NCN-90022-F1**
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	▪	–	▪
	intelligent Auto Exposure (iAE)	▪	–	–
	starlight (extreme low-light sensitivity)	–	–	–
	ultra HD	–	–	–
	Built-in Intelligent Video Analysis (IVA)	▪	▪	–
Basic features	Maximum resolution	HD 1080p	320 x 240	1080p
	Image sensor type	1/2.7"	FPA - Vox	1/2.7"
	Max. Frames Per Second (FPS)	30 fps@1080p	8.3 fps@240p (-VxxL), 30 fps@240p (-VxxH)	30 fps@1080p
	Indoor / outdoor / in-vehicle	–/▪/–	–/▪/–	▪/–/–
	Day/night	▪	–	▪
	Wide Dynamic Range (WDR)	92dB (IVA model +16dB)	–	–
	ONVIF conformant	▪	▪	▪
	Built-in microphone	–	–	–
	Power over Ethernet (PoE)	▪	–	▪
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	▪/4 streams	▪/4 streams	▪/4 streams
	Privacy masking	▪	–	▪
	Region Of Interest tracking	▪	–	–
Alarm triggering	Tamper detection	▪	▪	▪
	Video motion detection	▪	▪	▪
	Intelligent Video Analysis (IVA)	▪	▪	–
	Audio detection	▪	▪	▪
Sensitivity	Minimum illumination day mode (color)	0.4 lux	–	0.3 lux
	Minimum illumination night mode (black / white)	0 lux	0 lux	0 lux
	Night vision	▪ (infrared)	▪ (thermal)	▪ (infrared)
	Max. range at night	120 m (394 ft)	1450 m (4758 ft)	9 m (30 ft)
Lens	Automatic Back Focus (ABF)	▪	–	–
	Automatic varifocal	▪	–	–
	Focal length	10 - 23 mm	9 mm (-V9L, -V9H), 13 mm (-V13L, -V13H), 19 mm (-V19L, -V19H), 60 mm (-V60L, -V60H)	2 mm
	Horizontal Angle of View (HAoV)	14.8°-34°	–	121°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	150-352/77-181/52-122/21-49	–	20/10/7/3
Storage	Memory card slot	▪ Up to 2 TB	▪ Up to 32 GB	▪ Up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting (FTP only)	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	2/2	1/1
	Audio in/out	▪/▪	–/–	▪/▪
	hybrid* / confrontation monitor	–/–	–/–	–/–
Housing	Weather rating	IP66	IP66	IP65
	Vandal resistant	IK10	–	IK10
	Operating temperature	-40° to 50° C (-40° to 122° F)	-50° to 55° C (-58° to 131° F)	-10° to 50° C (14° to 122° F)

* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

IP Video
Specialty Cameras

▪ Available – Not available

		▶EXTEGRA IP starlight 9000 FX**	▶EXTEGRA IP dynamic 9000 FX**
Commercial Type Number		**NXF-7130-xx**	**NXF-7230-xx**
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	▪	▪
	intelligent Auto Exposure (iAE)	–	–
	starlight (extreme low-light sensitivity)	▪	–
	ultra HD	–	–
	Built-in Intelligent Video Analysis (IVA)	▪	▪
Basic features	Maximum resolution	HD 720p	HD 1080p
	Image sensor type	1/3"	1/2.8"
	Max. Frames Per Second (FPS)	60 fps@720p	30 fps@1080p
	Indoor / outdoor / in-vehicle	-/▪ (Ex-Proof/Corrosive)/-	-/▪ (Ex-Proof/Corrosive)/-
	Day/night	▪	▪
	Wide Dynamic Range (WDR)	▪	▪
	ONVIF conformant	▪	▪
	Built-in microphone	–	–
	Power over Ethernet (PoE)	▪	▪
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	▪	▪
	Privacy masking	▪	▪
	Region Of Interest tracking	–	–
Alarm triggering	Tamper detection	▪	▪
	Video motion detection	▪	▪
	Intelligent Video Analysis (IVA)	▪	▪
	Audio detection	▪	▪
Sensitivity	Minimum illumination day mode (color)	0.25 lux	0.35 lux
	Minimum illumination night mode (black / white)	0.008 lux	0.013 lux
	Night vision	▪ (External EX65 IR)	▪ (External EX65 IR)
	Max. range at night	–	–
Lens	Automatic Back Focus (ABF)	▪	▪
	Automatic varifocal	▪	▪
	Focal length	4.3 mm - 129 mm	4.3 mm - 129 mm
	Horizontal Angle of View (HAoV)	2.1° to 59°	2.1° to 59°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	–	–
Storage	Memory card slot	▪ Up to 2 TB	▪ Up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting (FTP only)	Auto or Alarm JPEG Posting (FTP only)
Connections	Alarm input / output	3/2	3/2
	Audio in/out	1/1	1/1
	hybrid* / confrontation monitor	–/–	–/–
Housing	Weather rating	IP67	IP67
	Vandal resistant	–	–
	Operating temperature	-50° to 60° C (-58° to 140° F)	-50° to 60° C (-58°F to 140° F)

* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system
** Available as of July 2014

IP Video
Moving Cameras

▪ Available – Not available

		▶AUTODOME easy II	▶AUTODOME junior HD
Commercial Type Number		**VEZ-211/221**	**VJR-811/821/831**
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	–	–
	intelligent Auto Exposure (iAE)	–	–
	intelligent Tracking	–	–
	starlight (extreme low-light sensitivity)	–	–
	Built-in Intelligent Video Analysis (IVA)	▪	▪
Basic features	Maximum resolution	4CIF	HD 1080p
	Image sensor type	1/4" CCD	1/2.8"
	Max. Frames Per Second (FPS)	30 fps@576p	60 fps@720p 30 fps@1080p
	Indoor / outdoor / in-vehicle	▪/▪/–	▪/▪/–
	Day/night	–	▪
	Wide Dynamic Range (WDR)	–	–
	ONVIF conformant	▪	▪
	Built-in microphone	–	–
	Power over Ethernet (PoE)	▪ (only Indoor)	▪ (PoE+ only Indoor)
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	▪/3 streams	▪/3 streams
	Privacy masking	▪	▪
	Nbr of presets / guard tours	99/2	99/2
	Wiper	–	–
Alarm triggering	Tamper detection	▪	▪
	Video motion detection	▪	▪
	Intelligent Video Analysis (IVA)	▪	▪
	Audio detection	–	▪
	PTZ intelligent Tracking	–	–
Sensitivity	Minimum illumination day mode (color)	1 lux	1.2 lux
	Minimum illumination night mode (black / white)	–	0.06 lux
	Night vision	–	–
	Max. range at night	–	–
Lens	Focal length	4.2 - 42 mm	6.3 - 63 mm
	Horizontal Angle of View (HAoV)	–	–
	PTZ Zoom optical / digital	10x/12x	10x/16x
	Tilt angle	-90° to +4°	-90° to 0°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)"	–	–
Storage	Memory card slot	–	–
	Cloud application storage	Auto or Alarm JPEG Posting (FTP only)	Auto or Alarm JPEG Posting (FTP only)
Connections	Alarm input / output	2/1	2/1
	Audio in/out	–/–	▪/▪
	hybrid* / confrontation monitor	–/–	–/–
Housing	Weather rating	IP65 (outdoor)	IP65 (outdoor)
	Vandal resistant	–	–
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

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IP Video
Moving Cameras

■ Available – Not available

		▸AUTODOME IP 7000	▸AUTODOME IP 7000 HD	▸AUTODOME IP starlight 7000**	▸AUTODOME IP dynamic 7000**
Commercial Type Number		**VG5-7028/7036**	**VG5-7220**	**VG5-7130**	**VG5-7230**
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	–	–	■	■
	intelligent Auto Exposure (iAE)	–	–	–	–
	intelligent Tracking	■	■	■	■
	starlight (extreme low-light sensitivity)	–	–	■	–
	Built-in Intelligent Video Analysis (IVA)	■	■	■	■
Basic features	Maximum resolution	4CIF	HD 1080p	HD 720p	HD 1080p
	Image sensor type	1/4" CCD	1/2.8"	1/3" CMOS	1/2.8"
	Max. Frames Per Second (FPS)	30 fps@576p	60 fps@720p 30 fps@1080p	60 fps@720p	30@1080p
	Indoor / outdoor / in-vehicle	■/■/–	■/■/–	■/■/–	■/■/–
	Day/night	■	■	■	■
	Wide Dynamic Range (WDR)	92dB	86dB	90dB	100dB
	ONVIF conformant	■	■	■	■
	Built-in microphone	–	–	–	–
	Power over Ethernet (PoE)	■ (HiPoE)	■ (HiPoE)	■ (HiPoE)	■ (HiPoE)
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams	■/4 streams	■/4 streams
	Privacy masking	■	■	■	■
	Nbr of presets / guard tours	256/2	256/2	256/2	256/2
	Wiper	–	–	–	–
Alarm triggering	Tamper detection	■	■	■	■
	Video motion detection	■	■	■	■
	Intelligent Video Analysis (IVA)	■	■	■	■
	Audio detection	■	■	■	■
	PTZ intelligent Tracking	■	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.66 lux (36x) 0.33 lux (28x)	0.8 lux	0.052 lux	0.066 lux
	Minimum illumination night mode (black / white)	0.104 lux (36x) 0.066 lux (28x)	0.12 lux	0.0103 lux	0.033 lux
	Night vision	–	–	■ (starlight)	–
	Max. range at night	–	–	–	–
Lens	Focal length	3.4-122.4 mm (x36) 3.5-98 mm (x28)	4.7 - 94 mm	4.3 mm to 129 mm	4.3 mm to 129 mm
	Horizontal Angle of View (HAoV)	–	–	2.3° to 65°	2.3° to 65°
	PTZ Zoom optical / digital	36x or 28x/12x	20x/12x	30x/12x	30x/12x
	Tilt angle	-90° to 14° (pendant)	-90° to 14° (pendant)	-90° to 14° (pendant)	-90° to 14° (pendant)
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)"	–	–	–	–
Storage	Memory card slot	■ Up to 32 GB / 2 TB	■ Up to 32 GB / 2 TB	■ Up to 2 TB	■ Up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	7/4	7/4	7/4	7/4
	Audio in/out	■/■	■/■	■/■	■/■
	hybrid* / confrontation monitor	–/–	–/–	–/–	–/–
Housing	Weather rating	IP66 (outdoor)	IP66 (outdoor)	IP66 (outdoor)	IP66 (outdoor)
	Vandal resistant	IK8 with rugged bubble	IK8 with rugged bubble	IK8 with rugged bubble	IK8 with rugged bubble
	Operating temperature	-40° to 55° C (-40° F to 131° F)	-40° to 55° C (-40° F to 131° F)	-40° to 55° C (-40° F to 131° F)	-40° to 55° C (-40° F to 131° F)

* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system
** Available as of July 2014

IP Video
Moving Cameras

▪ Available – Not available

		▸MIC 550	▸MIC 550 IR	▸MIC 612
Commercial Type Number		**MIC-550AL ****	**MIC-550IR ****	**MIC612 ****
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	–	–	–
	intelligent Auto Exposure (iAE)	–	–	–
	intelligent Tracking	–	–	–
	starlight (extreme low-light sensitivity)	–	–	–
	Built-in Intelligent Video Analysis (IVA)	▪	▪	▪
Basic features	Maximum resolution	550 TVL	550 TVL	550 TVL (optical) 320x256 / 640x480 (thermal)
	Image sensor type	1/4" CCD	1/4" CCD	1/4" CCD / FPA
	Max. Frames Per Second (FPS)	30 fps@576p	30 fps@576p	30 fps@576p
	Indoor / outdoor / in-vehicle	▪/▪/–	–/▪/–	–/▪/–
	Day/night	▪	▪	▪ (optical)
	Wide Dynamic Range (WDR)		–	–
	ONVIF conformant	▪	▪	▪
	Built-in microphone	–	–	–
	Power over Ethernet (PoE)	–	–	–
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	▪/4 streams	▪/4 streams	▪/4 streams
	Privacy masking	▪	▪	▪
	Nbr of presets / guard tours	99/2	99/2	99/2
	Wiper	▪	▪	▪
Alarm triggering	Tamper detection	▪	▪	▪
	Video motion detection	▪	▪	▪
	Intelligent Video Analysis (IVA)	▪	▪	▪
	Audio detection	–	–	–
	PTZ intelligent Tracking	–	–	–
Sensitivity	Minimum illumination day mode (color)	0.66 lux (36x) 0.33 lux (28x)	0.66 lux (36x) 0.33 lux (28x)	0.66 lux (optical) N.A. (thermal)
	Minimum illumination night mode (black / white)	0.104 lux (36x) 0.066 lux (28x)	0 lux	0.104 lux (optical) 0 lux (thermal)
	Night vision	–	▪ (Infrared)	▪ (Infrared/Thermal)
	Max. range at night	–	150 m (432 ft)	1500 m (4922 ft)
Lens	Focal length	3.4-122.4 mm (x36) 3.5-98 mm (x28)	3.4-122.4 mm (x36) 3.5-98 mm (x28)	3.4-122.4 mm (optical), 35 mm (thermal T models) 50 mm (thermal H models)
	Horizontal Angle of View (HAoV)	–	–	–
	PTZ Zoom optical / digital	36x or 28x/12x	36x or 28x/12x	36x/12x
	Tilt angle	-58° to 90° (upright), -103° to 90° (canted)	-58° to 90° (upright), -103° to 70° (canted)	-58° to 90°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)"	–	–	–
Storage	Memory card slot	▪ Up to 32 GB	▪ Up to 32 GB	▪ Up to 32 GB
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	8/2 (optional card)	4/0	8/2 (optional card)
	Audio in/out	–/–	–/–	–/–
	hybrid* / confrontation monitor	▪	▪	▪
Housing	Weather rating	IP68	IP68	IP68
	Vandal resistant	IK9	IK9	IK9
	Operating temperature	-40° to 60° C (-40° F to 140° F)	-40° to 60° C (-40° F to 140° F)	-40° to 60° C (-40° F to 140° F)

* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

** IP features are possible when using optional MIC-IP-PSU Power Supply

IP Video
Digital Recording

▮ Available – Not available

		All-in-one solution			
		▸DIVAR IP 3000	▸BRS HD Series	▸DIVAR IP 7000 1U	▸DIVAR IP 7000 2U
Commercial Type Number		**DIP-304x-xxx**	**BRS-xxx-xxxxx ****	**DIP-704x-xxx**	**DIP-708x-xxx**
Basic functions	Max. system size	32	64	64	128
	Integrated video management	▮	▮	▮	▮
	RAID Level	–	Mid-Tower: – 19-inch Rack Mount: U1/U2: RAID-5	–	RAID-5
	Supported resolutions	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 3MP, 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP
	Video compression	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG
	Transcoding	▮	▮	▮	▮
	ONVIF	▮	–	▮	▮
Mechanical	Form Factor	4-bay Mini-Tower	Mid-Tower or 19-inch Rack Mount (1U/2U)	1U 19-inch Rack Mount	2U 19-inch Rack Mount
	Network connections (LAN)	1x Gigabit Ethernet	2x Gigabit Ethernet	2x Gigabit Ethernet	2x Gigabit Ethernet
	USB ports	4x USB 2.0 / 1x USB 3.0	2x USB 2.0	4x USB 2.0	4x USB 2.0
	number of power supplies	1	Mid-Tower: 1 19-inch Rack Mount: 2	2	2
	Power supplies hot swappable	–	▮ (19-inch Rack Mount)	▮	▮
Video output	connector type	1 DVI	Mid-Tower: 1 DVI 19-inch Rack Mount: VGA, only for programming	1 DVI, 1 DP	1 DVI, 1 DP
	spotmonitor	1 per IP decoder	–	1 per IP decoder	1 per IP decoder
Audio	in/out channels	32 (audio playback via remote station only)	32 (audio playback via remote station only)	64 (audio playback via remote station only)	128 (audio playback via remote station only)
	compression Type	G.726	G.726	G.726	G.726
	Synchronous Audio	▮	▮	▮	▮
	Associate Multiple cameras to 1 Audio	▮	▮	▮	▮
Recording	Fps per camera	30 fps	30 fps	30 fps	30 fps
	Schedule recording modes	▮	▮	▮	▮
Storage options	max. drives supported	4	Tower: 4 19-inch Rack Mount 1U: 4 / 2U 8:	4	8
	Available capacities per drive	2 TB	Tower: 1 TB 19-inch Rack Mount 1U: 2TB	2 TB	2 or 3 TB
	Base system capacity TB	0, 4 or 8 TB	4, 8 or 16 TB	0, 4 or 8 TB	0, 16 or 24 TB
	Max. Base system capacity TB	8 TB	Tower: 4 TB 19-inch Rack Mount 1U: 8 TB, 2U: 16 TB	8 TB	24 TB
	Full system capacity TB	24 TB	–	104 TB	120 TB
	extenable/external support	iSCSI	–	iSCSI	iSCSI
Storage extentions	max. number of units	2x DIVAR IP 2000	–	4x DIVAR IP 6000	4x DIVAR IP 6000
	maximum drives supported	4	–	4 or 8	4 or 8
	available capacities per drive	2 TB	–	2 or 3 TB	2 or 3 TB
	hot swappable	–	–	▮	▮
Export / back-up of data	Data format	WMF, Bosch ASF	WMF, Bosch ASF	WMF, Bosch ASF	WMF, Bosch ASF
	Built-in DVD writer	–	▮	▮	▮
	Supported devices	External CD/DVD Writer, USB 2.0, USB 3.0, iSCSI	USB 2.0, Network Drive, DAS SCSI	USB 2.0, iSCSI	USB 2.0, iSCSI
	Back-up mode	Manual or Automatic	Manual or Automatic	Manual or Automatic	Manual or Automatic

Table continued on the next page

IP Video
Digital Recording

▮ Available – Not available

		All-in-one solution			
		▸DIVAR IP 3000	▸BRS HD Series	▸DIVAR IP 7000 1U	▸DIVAR IP 7000 2U
Commercial Type Number		**DIP-304x-xxx**	**BRS-xxx-xxxxx ****	**DIP-704x-xxx**	**DIP-708x-xxx**
Redundancy	Power suply redundency	–	19-inch Rack Mount	▮	▮
	Hot swappable HDD	–	–	▮	▮
Software options	PTZ control	▮	▮	▮	▮
	CCTV keyboard support	▮	▮ (with BVC)	▮	▮
	Admin control	▮	▮	▮	▮
	Export options	▮	▮	▮	▮
Remote access	Mobile device (smart phone/tablet)	▮ Video security app	–	▮ Video security app	▮ Video security app
	Network	10/100/1000 Ethernet	10/100/1000 Ethernet	10/100/1000 Ethernet	10/100/1000 Ethernet
	Web browser access	▮	▮	▮	▮
	Simultaneous accessible users	20	20	20	20
Advanced features support	Forensic search support (metadata)	▮	–	▮	▮
	Webclient	▮	▮	▮	▮
Supported software	Bosch Video Client	▮ (v1.5 or newer)	▮ (v1.5 or newer)	▮ (v1.5 or newer)	▮ (v1.5 or newer)
	Bosch Video Management Systeem	▮ (v4.50 or newer)	▮ (v4.50 or newer)	▮ (v4.50 or newer)	▮ (v4.50 or newer)
	3rd Party software	–	–	–	–
3rd party integration tools	Optional ATM/POS integration	▮	–	▮	▮
	SDK (IPP)	▮	–	▮	▮

** not all models are available in all regions, please check with your local sales representive

IP Video
Digital Storage

■ Available – Not available

Network Video Recorder					
	▸DIVAR IP 2000	▸DLA 1200 Series	▸DIVAR IP 6000 1U	▸DIVAR IP 6000 2U	▸DSA-Series
Commercial Type Number		**DIP-204x-xxx**	**DLA-AIOxx-xxx**	**DIP-604x-xxx**	**DIP-608-x-xxx**	**DSA-Nxxxxx-xxxx**
Basic functions	Max. system size	16	32	128	128	400
	Integrated video management	–	–	–	–	–
	RAID Level	–	–	RAID-5	RAID-5	RAID-5/RAID-6
	Supported resolutions	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP
	Video compression	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG
	Transcoding	■	–	■	■	–
	ONVIF	■	■	■	■	■
Mechanical	Form Factor	4-bay Mini-Tower	Mid-Tower	1U 19-inch Rack Mount	2U 19-inch Rack Mount	2U 19-inch Rack Mount
	Network connections (LAN)	1x Gigabit Ethernet	1x Gigabit Ethernet	2x Gigabit Ethernet	2x Gigabit Ethernet	1x Gigabit Ethernet / 10x Gigabit Ethernet
	USB ports	2x USB 2.0	2x USB 2.0	4x USB 2.0	4x USB 2.0	–
	number of power supplies	1	1	2	2	2
	Power supplies hot swappable	–	–	■	■	■
Video output	connector type	VGA	VGA	VGA	VGA	–
	spotmonitor	1 per IP decoder	1 per IP decoder	1 per IP decoder	1 per IP decoder	–
Audio	in/out channels	16 (audio playback via remote station only)	(audio playback via remote station only)	128 (audio playback via remote station only)	128 (audio playback via remote station only)	400 (audio playback via remote station only)
	compression Type	G.726	G.726	G.726	G.726	G.726
	Synchronous Audio	■	■	■	■	■
	Associate Multiple cameras to 1 Audio	■	■	■	■	■
Recording	Fps per camera	30 fps	30 fps	30 fps	30 fps	30 fps
	Schedule recording modes	■	■	■	■	■
Storage options	max. drives supported	4	4	4	8	12
	Available capacities per drive	2 TB	1 TB	2 TB	2 or 3 TB	3 TB
	Base system capacity TB	0, 4 or 8 TB	4 TB	0 or 8 TB	0, 8, 12, 16, 24 TB	–
	Max. Base system capacity TB	8 TB	4 TB	8 TB	24 TB	36 TB
	Full system capacity TB	24 TB	–	104 TB	120 TB	192 TB / 540 TB **
	extenable/external support	iSCSI	–	iSCSI	iSCSI	6Gb/s SAS (Copper)
Storage extentions	max. number of units	–	–	4x DIVAR IP 6000	4x DIVAR IP 6000	7 / 3 **
	maximum drives supported	4	–	4 or 8	4 or 8	12 / 60 **
	available capacities per drive	2 TB	–	2 TB	2 TB	2 TB / 3 TB **
	hot swappable	–	–	■	■	■
Export / back-up of data	Data format	WMF, Bosch ASF	WMF, Bosch ASF	WMF, Bosch ASF	WMF, Bosch ASF	WMF, Bosch ASF
	Built-in DVD writer	–	–	–	–	–
	Supported devices	External CD/DVD Writer, USB 2.0, iSCSI	External CD/DVD Writer, USB 2.0, iSCSI	External CD/DVD Writer, USB 2.0, iSCSI	External CD/DVD Writer, USB 2.0, iSCSI	External CD/DVD Writer, USB 2.0, iSCSI
	Back-up mode	Manual	Manual	Manual	Manual	Manual or Automatic
Redundancy	Power suply redundency	–	–	–	–	■
	Hot swappable HDD	–	–	■	■	■

Table continued on the next page

IP Video
Digital Storage

▮ Available – Not available

Network Video Recorder						
		▸DIVAR IP 2000	▸DLA 1200 Series	▸DIVAR IP 6000 1U	▸DIVAR IP 6000 2U	▸DSA-Series
Commercial Type Number		**DIP-204x-xxx**	**DLA-AIOxx-xxx**	**DIP-604x-xxx**	**DIP-604x-xxx**	**DSA-Nxxxxx-xxxx**
Redundancy	Power suply redundency	–	–	–	–	▮
	Hot swappable HDD	–	–	▮	▮	▮
Software options	PTZ control	o *	o *	o *	o *	–
	CCTV keyboard support	o *	o *	o *	o *	–
	Admin control	o *	o *	o *	o *	–
	Export options	o *	o *	o *	o *	–
Remote access	Mobile device (smart phone/tablet)	▮ Video security app	▮ Video security app	▮ Video security app	▮ Video security app	–
	Network	10/100/1000 Ethernet	10/100/1000 Ethernet	10/100/1000 Ethernet	10/100/1000 Ethernet	1x Gigabit Ethernet/ 10x Gigabit Ethernet
	Web browser access	▮	▮	▮	▮	–
	Simultaneous accessible users	5	5	5	5	–
Advanced features support	Forensic search support (metadata)	–	–	–	–	–
	Webclient	–	–	–	–	SANtricity
Supported software	Bosch Video Client	▮	▮	▮	▮	–
	Bosch Video Management Systeem	▮ (v2.20 or newer)	▮ (v2.20 or newer)	▮ (v2.20 or newer)	▮ (v2.20 or newer)	–
	3rd Party software	–	–	–	–	–
3rd party integration tools	Optional ATM/POS integration	–	–	–	–	–
	SDK (IPP)	–	–	–	–	–

o * via Bosch video software

** Up to three high-density shelf expansion units (60 x 3 TB HDD per expension shelf) to one Dual controller base unit may be connected - CTN:DSA-N2C6X2-12AT

IP Video
Video Software

▪ Available – Not available

		▸Advanced Viewing Client	▸Video Management System		
Commercial Type Number		**BVC (v1.4)/Rec@edge**	**BRS (v8.11) including Appliance**	**BVMS (v4.5) Lite**	**BVMS (v4.5) Pro**
	Channel Count	Up to 128	Up to 64 per Station	32 to 64	8 to 200,000
	System Architecture Support	Standalone	Standalone or Peer-to-Peer (200 max.)	Standalone to Client Server	Client Server (one server/2000 cameras) Multi Server (up to 30 servers/10,000 cameras) Multi-System (unlimited servers/cameras)
	Full VMS	Advanced Viewing Client	Recorder + Viewing Client	Full VMS	Full VMS
	Software based Video IP Platform	▪	▪	▪	▪
	ONVIF for 3rd Party Camera Intergration	▪ (with VRM2.30/VSG1)	▪ (with v8.10)	▪	▪
	Multi-site Support (independent systems tied together)	–	▪ (via VPN tunnelled connection)	▪	▪
	Multi-site Support (dispersed system recording, cameras, remote independent client)	–	Independant Client with VPN or via Web, one site at a time	▪	▪
	Mobile Clients	–	–	▪ MVS license required: 1 license provides up to 20 connections. Multiple servers with MVS.	▪ MVS license required: 1 license provides up to 20 connections. Multiple servers with MVS per site.
	Workstations/Clients	1 standalone at a time (separate config needed)	5 web connections, 20 clients	2 clients for 32; 4 clients for 64	100 (Client-Server and Multi-Server); Unlimited (Multi-System)
	LDAP	–	▪	▪	▪
	COTS (Commercial off the Shelf) for Server/Workstation	▪	▪	▪	▪
Resolution	HD-ready	▪	▪	▪	▪
	SD and HD	▪	▪	▪	▪
	SD and HD Decoder support	▪	–	▪	▪
	Monitor Wall Client GUI Support	▪	–	▪	▪
Encoding	H.264	▪	▪	▪	▪
	MPEG-4	▪	▪	▪ (via BRS only)	▪ (via BRS only)
	3rd party camera support	ONVIF 1.02/Profile-S with DIVAR IP	AXIS MPEG-4 (No PTZ); ONVIF 1.02/ Profile-S	▪ ONVIF 1.02/Profile-S	▪ ONVIF 1.02/Profile-S
Display	Multi-monitor support	▪ (2)	▪ (via browser or BVC)	▪ (4)	▪ (4)
	Workstation OS support	XP, Vista, Win7,SP1	Win XP SP3 (32-bit); Win7 (32/64-bit)	XP, Win7,SP1	XP, Win7,SP1
	16:9 Monitor support	▪	▪	▪	▪
	Mapping	–	–	▪	▪
	Dynamic cameo scaling	▪	–	–	–

Table continued on the next page

IP Video
Video Software

▪ Available – Not available

		▸Advanced Viewing Client	▸Video Management System		
Commercial Type Number		**BVC (v1.4)/Rec@edge**	**BRS (v8.11) including Appliance**	**BVMS (v4.5) Lite**	**BVMS (v4.5) Pro**
Alarm Management	User management	–	▪	▪	▪
	Digital I/O alarms	▪	▪	▪	▪
	System event alarms	▪	▪	▪	▪
	Motion alarms	▪	▪	▪	▪
	Event response and command scripts	–	▪	▪	▪
	IVA alarms	▪	▪	▪	▪
	IVA forensic search	▪	–	▪	▪
	Audio	▪	▪	▪	▪
	Compound events	–	–	▪	▪
	Scheduled dependent alarming	–	▪	▪	▪
	Event allocation to user groups	–	–	▪	▪
Control	AUTODOME Intelligent Tracking	▪	–	–	–
	PTZ	▪	▪	▪	▪
	IntuiKey	▪ (limited functionality)	▪ (via BVC only)	▪	▪
	Virtual matrix	–	–	▪	▪
Storage	@edge camera support	▪	–	▪	▪
	iSCSI	▪	–	▪	▪
	NVR support	–	▪	▪ (BRS)	▪ (BRS)
	VRM	▪ (via DIVAR IP)	–	▪	▪
	IVA metadata	▪	–	▪	▪
	Support redundant storage	–	–	–	▪
	DLA Support (VRM Mode)	▪ (1)	–	▪ (5)	▪ (40)
Integration	BVMS	–	▪	–	–
	BRS	▪	–	▪	▪
	DxR 400/600/700	▪	–	▪	▪
	BVC	–	▪	–	–
	Bosch G Series panel	–	▪	–	–
	Access	–	▪	▪	▪
	OPC	–	▪	▪	▪
	CLI/CCL	–	▪	▪	▪
	ATM/POS	–	▪	▪	▪
	BIS	–	▪	▪	▪
	Script control for all system functions	–	–	▪	▪
	SDK integration into 3rd party SW	–	▪	▪	▪
	Virtual inputs	▪	▪	▪	▪
Networking	LAN/intranet	▪	▪	▪	▪
	WAN	–	▪ (via hardware VPN)	▪	▪
	Remote/Decoupled Client	–	▪	▪	▪
	Mobile Viewing APP	–	–	▪ (iOS only)	▪ (iOS only)
	Web Client	–	▪	▪	▪

IP Video
Encoders and Decoders

Encoders					Decoders		Transcoders
▸VIP X1XF E	▸VIP X1XF	▸VIDEOJET X20 XF E	▸VIDEOJET X40 XF E	▸VIP X16 XF E	▸VIDEOJET decoder 3000	▸VIDEOJET decoder 7000	▸VIDEOJET XTC XF

■ Available – Not available

Commercial Type Number		VIP-X1XF-E	VIP-X1XF	VJT-X20XF-E	VJT-X40XF-E	VIP-X16XF-E	VJD-3000	VJD-7000	VJT-XTCXF
	Description	Single Channel Video Encoder	Single Channel Premium Encoder	2 Channel H.264 Video Encoder	4 Channel H.264 Video Encoder	16 Channel H.264 Video Encoder	Single/Quad-stream Decoder	HD Video Decoder	4 Channel/Dual-stream Transcoder
Video/Audio	Camera Inputs	1	1	2	4	16	–	–	4
	Monitor Outputs	–	–	–	–	–	1 of 2 (HDMI, CVBS)	2 of 3 (DVI-I, HDMI, DP)	–
	Video Codec	H.264	H.264	H.264 MP H.264 BP	H.264 MP H.264 BP	H.264 MP H.264 BP	H.264 High Profile H.264 MP H.264 BP M-JPEG JPEG	H.264 MPEG-4	H.264 MP H.264 BP
	Frame Rate (FPS)	25/30 @ 4CIF	25/30 @ 4CIF	25/30	25/30	25/30 @ 4CIF	30 @ 1080p (single view) 60 @ 720p (single view) 4x 25/30 @ 4CIF (quad view)	4x 30 @ 1080p 4x 60 @ 720p 20x 25/30 @ 4CIF	25/30 @ 4CIF
	Audio In/Out	1/1	1/1	2/1	2/1	2/1	1/1	1/1	–
	Transcoding at the edge	–	–	■	■	–	–	–	■
Storage	Type	SD Card	SD Card	CF	CF	–	–	–	CF
	Capacity	2 TB	2 TB	2 TB	2 TB	–	–	–	2 TB
Intelligence	Direct-to-iSCSI	■	■	■	■	■	–	–	–
	Video Analytics	Motion+	IVA	Motion+	Motion+	Motion+	–	–	–
Interfaces	Alarm In	1	2	4	4	4	4	–	4
	Relay Out	1	2	1	1	1	1	–	1
	ONVIF conformant	■	■	■	■	■	–	–	–
Other	Keyboard	–	–	–	–	–	■	–	–
	IP Matrix	–	–	–	–	–	■	–	–

▸Modular Systems

■ Available – Not available

Commercial Type Number		VIP X1600-B	VIP X1600-XFB
	Description	Base System	Base System
	Bays	4	4
	Ethernet	Two 1 Gbps ports (1 front, 1 rear)	Three 1 Gbps ports (2 front, 1 rear)
	SFP Fiber Slot	–	■

2.8 – 12 mm

■ Available – Not available

Commercial Type Number		VIP X1600 XFM4A	VIP X1600 XFM4B
	Description	4 Channel H.264 Encoder Module	4 Channel H.264 Encoder Module with Bilinx
Video/Audio	Camera Inputs	4	4
	Video Codec	H.264 MP H.264 BP+ M-JPEG	H.264 MP H.264 BP+ M-JPEG
	Frame Rate (FPS)	25/30 @ 4CIF	25/30 @ 4CIF
	Audio In/Out	2/1	2/1
Intelligence	Direct-to-iSCSI	■	■
	Video Analytics	IVA	IVA
Interfaces	Alarm In	4	4
	Relay Out	1	1
	SFP Fiber Slot	■	■
	ONVIF conformant	■	■

IP Video
Flat Panel Monitors

▪ Available – Not available

▸High Definition

Commercial Type Number		UML-193-90	UML-223-90	UML-273-90	UML-323-90	UML-423-90	UML-553-90
Display	Type	19" LED	22" LED	27" LED	32" LED	42" LED	55" LED
	Max Pixel Resolution	1366 x 768	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080
	Horizontal Resolution	650 TVL	650 TVL	650 TVL	650 TVL	650 TVL	650 TVL
	Aspect Ratio	16:9	16:9	16:9	16:9	16:9	16:9
	Brightness (cd/m²)	250	250	300	350	500	450
	Contrast Ratio	1000:1	1000:1	3000:1	3000:1	4000:1	4000:1
	Backlight	30,000 hours	30,000 hours	30,000 hours	50,000 hours	50,000 hours	50,000 hours
	Viewing Angle (HxV)	170° x 160°	170° x 160°	178° x 178°	178° x 178°	178° x 178°	178° x 178°
Composite Video / Audio Loop-through		Passive	Passive	Passive	Passive	Passive	Passive
PC Compatible		▪	▪	▪	▪	▪	▪
Connectors	Composite Video (BNC)	–	–	2 (looping video)	1 (looping video)	2 (looping video)	2 (looping video)
	VGA	▪	▪	▪	▪	▪	▪
	DVI-D	▪	▪	▪	▪	▪	▪
	HDMI	▪	▪	▪	▪	▪	▪
Audio	Input	▪	▪	▪	▪	▪	▪
	Speaker	▪	▪	▪	▪	▪	▪
Mechanical	Width	448 mm	515 mm	642 mm	745 mm	977 mm	1256 mm
	Height	332 mm*	370 mm*	380 mm	440 mm	570 mm	727 mm
	Depth	182 mm*	182 mm*	76 mm	77 mm	83 mm	83 mm
	Weight	3.0 kg	3.6 kg	9.1 kg	12.5 kg	20 kg	32 kg
Power	Power Supply	Integrated	Integrated	Included	Integrated	Integrated	Integrated
	Power Consumption	42W	42W	75W	75W	150W	170W
Misc.	Picture-in-picture	–	–	–	–	–	–
	Front Panel Lockout	▪	▪	▪	▪	▪	▪
	IR Remote	–	–	–	▪	▪	▪
Cables Included	VGA-to-VGA	▪	▪	▪	▪	▪	▪
	DVI-to-DVI	▪	▪	▪	▪	▪	▪
Mounting	VESA Compliant	▪	▪	▪	▪	▪	▪
	Rack-mountable	–	–	–	–	–	–
	Table Stand	Included	Included	Included	UMM-LED32-SD	UMM-LED42-SD	UMM-LED42-SD
	Fixed Wall Mount	–	–	–	–	ST660	ST660
	Swivel/Tilt Wall Mount	–	–	UMM-WMT-32	UMM-WMT-32	–	–

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